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**Patent and Trademark Office**

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/337,040 06/28/99 SUGITA

M 684.2864

005514 MM91/0913  
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NEW YORK NY 10112

EXAMINER

NGUYEN, H

ART UNIT

PAPER NUMBER

2851

DATE MAILED:

09/13/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

# Office Action Summary

Application No.

09/337,040

Applicant(s)

SUGITA ET AL.

Examiner

Henry Hung V Nguyen

Art Unit

2851

-- The MAILING DATE of this communication appears on the cover sheet with the corresponding address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 03 July 2001.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-125 is/are pending in the application.
- 4a) Of the above claim(s) 1-12, 26-37, 51-62, 76-82 and 84 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 13-25; 38-50; 63-75; 83; 85-125 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☒ The proposed drawing correction filed on 7/3/01 is: a) ☒ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 5, 12.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

***Election/Restrictions***

1. This application contains claims 1-12, 26-37, 51-62, 76-82, and 84 are drawn to an invention nonelected with traverse in Paper No. 9. A complete reply to the final rejection must include cancelation of nonelected claims or other appropriate action (37 CFR 1.144) See MPEP § 821.01.

***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 13-25; 38-50; 63-75; 83; 85-125 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As to claims 13-25; 38-50; 63-75; 83; 85-125, the following term lacks proper antecedent basis:

“the same”; (the applicant is suggested to change “the same” to –the same mask pattern—or –said mask pattern--.)

***Claim Rejections - 35 USC § 102***

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

4. Claims 13-16, 17-25, 100-103 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Kudo (U.S.Pat. 5,392,094).

As to claims 13-16, 17-25, 100-103, Kudo discloses an exposure apparatus for transferring a same pattern formed on a reticle onto a substrate comprising all of the limitations of the instant claims: a first aperture variable means (14) as first exposure means for illumination the mask

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with light of a predetermined wavelength under a first illumination condition and a second aperture variable means (15) as a second exposure means for illumination the mask with the predetermined wavelength under a second illumination condition and control means (12) for controlling the operation of the first and second variable aperture stop means. It is inherent features that the development process must be performed after the exposures by first and second exposure means as disclosed by Kudo.

5. Claims 13-25, 100-103 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Shiraishi (U.S.Pat. 5,467,166).

As to claims 13-25, 100-103, Shiraishi discloses a projection exposure apparatus comprising all of the basic features of the instant claims including: a first optical members and second optical members for illumination the mask under first and second illumination conditions where the first and second conditions are different (see claims 1 and 2).

#### ***Allowable Subject Matter***

6. Claims 38-50, 63-75, 83, 85-99, 104-125 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

#### ***Response to Amendment***

7. Applicants' amendment filed July 3, 2001 have been entered. Claims 13-17, 20, 23-25, 38-42, 48-50, 63-67, 73, 75 and 83 are amended. New claims 85-125 are added.

Applicant's argument with respect to prior art have been carefully considered but they are not found to be persuasive. In response to applicant's argument Kudo and Shiraishi fails to disclose "first and second exposure means that illuminates a predetermined mask pattern under different illumination conditions prior to a development process"; the examiner disagrees because Kudo and Shiraishi meet the limitations of instant invention as broadly claimed. For example, Kudo (and/or Shiraishi) discloses a first aperture variable means (14) for illumination the mask with light of a predetermined wavelength under a first illumination condition and a second aperture variable means (15) for illumination the mask with light of a predetermined wavelength under second illumination condition. It is well known in the art that the aperture is for determining the size and shape of the illumination light and when sigma value of illumination is changed, or oblique illumination is to be performed, the aperture stop is replaced. Exposures are performed with different aperture stops as taught by Kudo (or with different coherence reducing members as taught by Shiraishi) which can be regarded as exposures under different illumination conditions in the broadest sense and further, performing exposures prior to development process are known per se in the art.

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

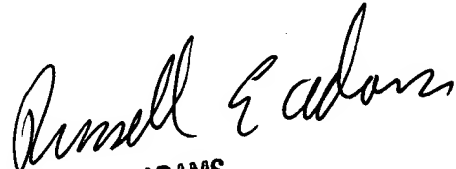
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CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Henry Hung V Nguyen whose telephone number is 703-305-6462. The examiner can normally be reached on Monday-Friday (First Friday off).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-4900.

hvn  
September 4, 2001

  
RUSSELL ADAMS  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2800